

PATENT SPECIFICATION

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(54) STERILE PACK

(71) We, J. G. FRANKLIN & SONS LIMITED, a British Company, of Birkbeck Works, Colvestone Crescent, Dalston, London, E.8, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The present invention relates to packs for sterile articles such as catheters and other surgical instruments.

Sterile articles such as catheters and other surgical instruments are commonly sealed in so-called "peel-packs" which comprise opposed strips of flexible material between which an article is sandwiched, said strips being marginally sealed together and being peelable apart to allow access to said article. The strips are generally provided with opposed tabs which can be grasped to facilitate the peeling apart of the strips. Sterilisation of the article may be carried out after it has been sealed in the peel-pack, e.g., as by irradiation with gamma rays.

Such peel-packs enable articles such as catheters and other surgical instruments to be maintained for long periods of time in a sterile condition, and hence ready for safe immediate use. It has been found, however, that contamination of the sterile article can occur when the pack is opened due to the fact that dust which has collected on the outside of the pack, and particularly between said opposed tabs, can fall between said strips and onto the article as the strips are peeled apart, and it is the object of the present invention to provide a pack in which the likelihood of contamination occurring in this way is obviated or reduced.

Accordingly the present invention provides a pack for a sterile article such as a catheter or other surgical instrument, said pack comprising opposed strips of flexible material between which the article is sandwiched, said strips being marginally sealed together and being peelable apart to allow access to the article, a first one of said strips having a tab

and the second of said strips having an extension, the said tab and extension serving as a means for grasping the pack and peeling apart said opposed strips, the extension being folded over in relation to the second strip to cover the tab of the first strip and sealingly secured to the first strip so that the extension is peelable from the first strip to expose the tab of that strip for grasping and peeling open the pack.

By the term 'peelable' we mean that when the adjacent tab and extension of the strips are gripped and continuously pulled apart the two strips progressively separate from one another although there may be some pulling away of the material of one strip by the other in the vicinity of the marginal sealing.

In the embodiment hereinafter particularly described and illustrated, the tab of the first strip is folded over in relation to its strip, but this is not essential provided that the extension completely covers the said tab and can be stripped back to expose the tab for grasping and peeling open the pack. Said extension may be integral with its corresponding strip or may comprise a tab integral with that strip and a separate piece secured to the second strip to cover and extend beyond that tab.

The said opposed strips are preferably two separate strips of material which are brought into opposed relationship and marginally sealed together, although they could if desired be formed by a single strip of material which is folded substantially in half in which case the marginal seal need not extend transversely adjacent the fold.

Said marginal sealing is preferably a heat sealing and accordingly, although the said strips may comprise any suitable material, at least one of the strips may be of a thermoplastic material. For example the pack may be formed from two separate strips one of which comprises a polythene/regenerated cellulose laminate, and the other of which comprises a paper/polythene/paper laminate, the polythene layer of said one strip being heat-sealed to one of the outer paper layers of the other strip so that the strips can readily be peeled

apart even though some pulling away of the paper material of the layer may occur. The polythene/regenerated cellulose laminate may be a transparent laminate so that the contents of the pack are open to view.

The sealing of said extension may likewise be a heat sealing or may be by means of a suitable adhesive, e.g., a latex contact adhesive, which will permit the peeling thereof.

The said extension is preferably provided with a free flap portion which can be grasped to facilitate the peeling thereof.

In order that the invention may be the more readily understood reference will hereinafter be made to the accompanying diagrammatic drawings which show, by way of example, a pack according to the present invention and in which:—

Figure 1 is a fragmentary cross-section, and Figure 2 is an elevation.

The pack illustrated comprises opposed strips 1, 2 or flexible material between which is sandwiched a catheter 3, the strips 1, 2 being marginally sealed together at 4 by multiple lines of heat-sealing. The strips 1, 2 respectively are extended beyond the multiple lines of heat-sealing 4a at the top of the pack to form tabs 5, 6. The tabs 5, 6 are together folded over so as to lie against the outer surface of the strip 1, a label 7 being applied over and secured to the outer tab 6 so as in effect to form an extension of the strip 2, the label covering the tabs and being secured to the adjacent outer surface of the strip 1 by means of a latex contact adhesive which will permit of the label 7 being peeled away from the outer surface of the strip 1 thus enabling the tab 5 to be grasped and the strips 1, 2 peeled apart. The label has a free flap portion 8 at the lower end thereof which can be grasped to facilitate peeling of the label away from the strip 1.

The strip 1 comprises a polythene/regenerated cellulose laminate whilst the strip 2 comprises a paper/polythene/paper laminate, the polythene layer of the strip 1 being on the inside. The label 7 is a paper label and may be printed with any suitable indicia, e.g., the manufacturers name and/or trade mark and a description of the contents of the pack. It will be appreciated that if desired the strip 1, strip 2 and/or label 7 could be of any other suitable material or that the label 7 could be dispensed with and the tab 6 extended beyond the tab 5 to provide the required extension.

After sealing of the catheter within the pack and appreciation of the label 7 the pack is sterilised as by subjecting it to irradiation with gamma rays. As the tabs 5 and 6 are sealed beneath the label 7 they will be maintained in a sterile condition and no dust or other con-

taminating particles will be able to collect therebetween, thus reducing the likelihood of the catheter 3 becoming contaminated when the pack is opened.

WHAT WE CLAIM IS:—

1. A pack for a sterile article such as a catheter or other surgical instrument, said pack comprising opposed strips of flexible material between which the article is sandwiched, said strips being marginally sealed together and being peelable apart to allow access to the article, a first one of said strips having a tab and the second one of said strips having an extension, the said tab and extension serving as a means for grasping the pack and peeling apart said opposed strips, the extension being folded over in relation to the second strip to cover the tab of the first strip and sealingly secured to the first strip so that the extension is peelable from the first strip to expose the tab of that strip for grasping and peeling open the pack.

2. A pack according to claim 1, wherein the extension comprises a separate piece of material secured to the second strip.

3. A pack according to claim 2, in which the extension is formed by a tab integral with the second strip and by the separate piece of material secured to the second strip to cover the tab thereof and in which the separate piece is secured to the outer surface of the first strip to cover the two tabs.

4. A pack according to claim 2 or 3 wherein the separate piece is a printed label.

5. A pack according to claim 1, wherein the separate piece is adhesively secured to the second strip.

6. A pack according to any preceding claim in which the marginal sealing comprises a heat sealing.

7. A pack according to any preceding claim, wherein said first strip comprises a polythene/regenerated cellulose laminate arranged with its polythene layer facing inwardly of the pack and said second strip comprises a paper/polythene/paper laminate.

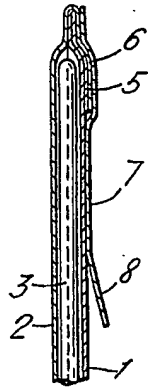
8. A pack according to any preceding claim, wherein said extension is provided with a free flap portion which can be grasped to facilitate the peeling thereof.

9. A pack according to any preceding claim, wherein at least one of said strips is transparent to permit viewing of the contents of the pack.

10. A pack for a sterile article such as a catheter or other surgical instrument substantially as herein described with reference to and as illustrated in the accompanying diagrammatic drawings.

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Fig. 1.*Fig. 2.*